

We Claim:

1. A process for treating a composition comprising one or more undesired compounds and one or more desired compounds so as to reduce the concentration 5 of at least one of the undesired compounds, the process comprises the steps of:

- (1) contacting the composition with an extraction solvent comprising a (hydro)fluorocarbon, and
- (2) separating the solvent from the one or 10 more desired compounds;

wherein one or more of the desired compounds is an alkali metal fluoride or an alkaline earth metal fluoride.

2. A process according to claim 1, wherein 15 the alkali metal fluoride or alkaline earth metal fluoride is calcium fluoride or potassium fluoride.

3. A process according to claim 1 and claim 2, wherein at least one of the undesired compounds is odoriferous.

20 4. A process according to claim 1, wherein at least one of the undesired compounds is a sulfur and/or nitrogen containing compound.

5. A process according to claim 4, wherein 25 the undesired sulfur containing compound is selected from the group consisting of: carbon disulfide, carbonyl sulfide, dimethyldisulfide, ethanethiol, diethyldisulfide, 1,3-dihydro-2H-imidazole 2-thione, 2-(methylthio)-propane, 2-(methylthio)-butane, 1-(methylthio)-butane, methylethyldisulfide, 2-(ethylthio)-30 butane, sec-butyl isopropylsulfide, 1-(ethylthio)-butane, 1-[(methylethyl)thio]butane and bis[2-(ethylthio)ethyl]ether, and combinations thereof.

6. A process according to claim 4, wherein 35 the undesired nitrogen containing compound is selected from the group consisting of: ammonia, nitromethane,

methylamine, dimethylamine, trimethylamine, LDA (lithium diisopropylamide), hydroxylamine, ureas, ethylamine, diethylamine, triethylamine, 1,3-dihydro-2H-imidazole-2-thione, N,N-dimethyl-ethanethioamide and 2,2-dimethoxy-N-  
5 methyl-ethanamine, or combinations thereof.

7. A process according to claim 1, wherein the composition is in the solid state or in the form of a slurry.

8. A process according to claim 1, wherein  
10 the composition is in the liquid phase.

9. A process according to claim 1, wherein the extraction solvent comprises at least one (hydro)fluorocarbon selected from the group consisting of: (hydro)fluoromethanes, (hydro)fluoroethanes,  
15 (hydro)fluoropropanes, and combinations thereof.

10. A process according to claim 9, wherein the extraction solvent comprises at least one (hydro)fluorocarbon selected from the group consisting of: trifluoromethane (R-23), fluoromethane (R-41),  
20 difluoromethane (R-32), pentafluoroethane (R-125), 1,1,1-trifluoroethane (R-143a), 1,1,2,2-tetrafluoroethane (R-134), 1,1,1,2-tetrafluoroethane (R-134a), 1,1-difluoroethane (R-152a), 1,1,1,3,3-pentafluoropropane (R-245fa), 1,1,2,2,3-pentafluoropropane (R-245ca),  
25 1,1,1,2,3-pentafluoropropane (R-245eb), 1,1,2,3,3-pentafluoropropane (R-245ea), 1,1,1,2,3,3-hexafluoropropane (R-236ea), 1,1,1,2,2,3-hexafluoropropane (R-236cb), 1,1,1,3,3,3-hexafluoropropane (R-236fa), 1,1,1,2,3,3,3-heptafluoropropane (R-227ea) and 1,1,1,2,2,3,3-heptafluoropropane (R-227ca), and combinations thereof.  
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11. A process as claimed in claim 10, wherein the extraction solvent comprises at least one compound selected from the group consisting of: 1,1,1,2-tetrafluoroethane (R-134a), 1,1,1,3,3-pentafluoropropane  
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(R-245fa), 1,1,1,2,3,3-hexafluoropropane (R-236ea) and 1,1,1,2,3,3,3-heptafluoropropane (R-227ea), and combinations thereof.

12. A process as claimed in claim 11, wherein  
5 the extraction solvent comprises 1,1,1,2-tetrafluoroethane (R-134a).

13. A process according to claim 1, wherein the extraction solvent further comprises a co-solvent.

14. A process as claimed in claim 13, wherein  
10 the co-solvent is halogen free.

15. A process according to claim 1, wherein said process is conducted at a temperature in the range of from 0 to 30° C.

16. A process according to claim 1, wherein  
15 said process is conducted at a pressure in the range of from 1 to 30 bar.

17. process for treating a composition comprising one or more undesired compounds and one or more desired compounds so as to reduce the concentration  
20 of at least one of the undesired compounds, the process comprises the steps of:

(1) contacting the composition with an extraction solvent comprising:

25 a (hydro)fluorocarbon; and  
a co-solvent;

(2) separating the solvent from the one or more desired compounds;

wherein one or more of the desired compounds is an alkali metal fluoride or an alkaline earth metal  
30 fluoride; and

wherein at least one of the undesired is a sulfur and/or nitrogen containing compound.

18. he process according to claim 17 wherein said co-solvent is halogen free.

35 19.A process for treating a composition

comprising one or more undesired compounds and one or more desired compounds so as to reduce the concentration of at least one of the undesired compounds, the process comprises the steps of:

5                 (1) contacting the composition with an extraction solvent comprising a extraction solvent comprises at least one (hydro)fluorocarbon selected from the group consisting of: (hydro)fluoromethanes, (hydro)fluoroethanes, (hydro)fluoropropanes, and  
10 combinations thereof;

                   (2) separating the solvent from the one or more desired compounds;

                   wherein one or more of the desired compounds is an alkali metal fluoride or an alkaline earth metal  
15 fluoride; and

                   wherein at least one of the undesired is a sulfur and/or nitrogen containing compound.